

What is claimed is:

1. An atomization system (1) for fuels, particularly for charging a chemical reformer for obtaining hydrogen, comprising a fuel injector (2), an atomization tube (4), an air inlet (5) and at least one metering aperture (6),
wherein, the atomization tube (4) features at least a first section (9) and a second section (10) having different outer diameters and/or wall thicknesses.
2. The atomization system as recited in Claim 1,
wherein, the inner diameter of the first section (9) is greater than the inner diameter of the second section (10).
3. The atomization system as recited in Claim 1 or 2,
wherein, the second section (10) is formed at the downstream side of the first section (9).
4. The atomization system as recited in Claim 3,
wherein, in second section (10), multiple bore holes (8) are formed on multiple levels (7).
5. The atomization system as recited in Claim 1 or 2,
wherein, the second section (10) is divided into multiple subsections (11, 12).
6. The atomization system as recited in Claim 5,
wherein, the outer diameter of the atomization tube (4) is greater in the first subsections (11) than in the second subsections (12).
7. The atomization system as recited in Claim 6,
wherein, the second subsections (12) coincide with the levels (7).
8. The atomization system as recited in Claim 7,
wherein, a plurality of bore holes (8) are formed in each of the second subsections (12).
9. The atomization system as recited in Claim 3,
wherein, the wall thickness of the first section (9) equals the wall thickness of the second section (10).

10. The atomization system as recited in Claim 9,
wherein, the diameters of the bore holes (8) per level (7) increase in a downstream direction
11. The atomization system as recited in one of Claims 1 through 10,
wherein, the outer shaping of the atomization tube (4) is achieved by turning on a lathe,
grinding or erosive machining.
12. The atomization system as recited in one of Claims 3, 9 or 10,
wherein, the diameter of the bore holes (8) is approximately 100 μm to 250 μm .
13. The atomization system as recited in Claim 12,
wherein, the ratio between the diameter and the length of the bore holes (8) is greater than, or
equal to, 1.